

## NiceZyme View of ENZYME: EC 1.8.1.7

<b>Official Name</b>	
Glutathione-disulfide reductase.	
<b>Alternative Name(s)</b>	
Glutathione reductase. Glutathione reductase (NADPH). NADPH-glutathione reductase. GSH reductase. GSSG reductase. NADPH-GSSG reductase. Glutathione S-reductase. NADPH:oxidized-glutathione oxidoreductase.	
<b>Reaction catalysed</b>	
2 glutathione + <u>NADP (+)</u> <=> glutathione disulfide + <u>NADPH</u>	
<b>Cofactor(s)</b>	
FAD.	
<b>Comments</b>	
<ul style="list-style-type: none"> <li>Activity is dependent on a redox-active disulfide in each of the active centres.</li> <li>Formerly EC <u>1.6.4.2</u>.</li> </ul>	
<b>Human Genetic Disease(s)</b>	
Hemolytic anemia due to glutathione reductase deficiency	<u>MIM:138300</u>
<b>Cross-references</b>	
PROSITE	<u>PDOC00073</u>
BRENDA	<u>1.8.1.7</u>
EMP/PUMA	<u>1.8.1.7</u>
WIT	<u>1.8.1.7</u>
Kyoto University LIGAND chemical database	<u>1.8.1.7</u>
IUBMB Enzyme Nomenclature	<u>1.8.1.7</u>
IntEnz	<u>1.8.1.7</u>
MEDLINE	<u>Find literature relating to 1.8.1.7</u>
Swiss-Prot	<u>P42770</u> , GSHC_ARATH; <u>P27456</u> , GSHC_PEA ; <u>P48640</u> , GSHC_SOYBN; <u>Q43154</u> , GSHC_SPIOL; <u>P80461</u> , GSHC_TOBAC; <u>P48638</u> , GSHR_ANASP; <u>P48641</u> , GSHR_ARATH; <u>O04955</u> , GSHR_BRARP; <u>P48639</u> , GSHR_BURCE; <u>P30635</u> , GSHR_CAEEL; <u>P06715</u> , GSHR_ECOLI; <u>P43783</u> , GSHR_HAEIN; <u>P00390</u> , GSHR_HUMAN; <u>P47791</u> , GSHR_MOUSE; <u>P48642</u> , GSHR_ORYSA; <u>Q43621</u> , GSHR_PEA ; <u>O15770</u> , GSHR_PLAF7; <u>Q94655</u> , GSHR_PLAFK; <u>P23189</u> , GSHR_PSEAE; <u>P78965</u> , GSHR_SCHPO; <u>P11804</u> , GSHR_SPISP; <u>Q60151</u> , GSHR_STRTR; <u>P41921</u> , GSHR_YEAST;

*View entry in original ENZYME format*

If you would like to retrieve all the Swiss-Prot entries referenced in this entry, click [here](#).

=> a nls

(FILE 'HOME' ENTERED AT 12:48:32 ON 08 OCT 2003)

FILE 'REGISTRY' ENTERED AT 12:49:54 ON 08 OCT 2003  
L1 1 S 9001-48-3/RN

FILE 'HCAPLUS' ENTERED AT 12:50:57 ON 08 OCT 2003

FILE 'REGISTRY' ENTERED AT 12:51:02 ON 08 OCT 2003  
SET SMARTSELECT ON  
L2 SEL L1 1- CHEM : 11 TERMS  
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 12:51:03 ON 08 OCT 2003

L3 7442 S L2  
L4 1445 S L3 (L) (PEPTIDE OR PROTEIN OR POLYPEPTIDE)  
L5 707 S L4 AND PD<19940713  
L6 0 S L5 AND (CLOVER YELLOW VEIN VIRUS)  
L7 0 S L5 AND (NUCLEAR INCLUSION)

=> s 9001-48-3/rn  
L1 1 9001-48-3/RN  
=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN

RN 9001-48-3 REGISTRY

CN Reductase, glutathione (9CI) (CA INDEX NAME)

OTHER NAMES:

CN E.C. 1.6.4.2

CN Glutathione disulfide oxidoreductase

CN Glutathione disulfide reductase

CN Glutathione reductase

CN Glutathione S-reductase

CN GSH reductase

CN GSSG reductase

CN NADP-dependent glutathione reductase

CN NADPH-glutathione reductase

CN NADPH-GSSG reductase

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,  
CA, CABA, CANCERLIT, CAPLUS, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM,  
EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, NAPRALERT, NIOSHTIC, PIRA,  
PROMT, TOXCENTER, USPAT2, USPATFULL

Other Sources: EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

5868 REFERENCES IN FILE CA (1907 TO DATE)

22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5875 REFERENCES IN FILE CAPLUS (1907 TO DATE)